

Bellringer:

1) Why is Scientific notation important?

Write the following #s

2)  $2.97 \times 10^5$

297000

297000

3) write 0.00009437 in scientific notation

$9.437 \times 10^{-5}$

Aug 30-9:13 AM

percent error =  $\frac{|E.V. - A.V.|}{A.V.} \times 100 = \%$

Erik A.V. 63.5 inches tall. When Mr. Rockswold measures Erik's height, he comes up with E.V. 68.25. What is the percent error?

$$\frac{(E.V.) - (A.V.)}{A.V.} \times 100 = \frac{68.25 - 63.5}{63.5} \times 100 = \frac{4.75}{63.5} \times 100$$

→ 7.48%

Sep 4-10:21 AM

# ☆ Scientific Methods ☆

"Problem - solving"

- Observe → Question
- Hypothesis
- test Hypothesis
- Data → analyze data
- conclusion

Sep 3-10:24 AM

$$10^0 = 1, \quad 2.73 \times 10^5$$

$$10^1 = 10 = 10 \quad \frac{2.73 \times 10^5}{273000}$$

$$10^2 = 100$$

$$10^{-1} = \frac{0.000513 \times 10^{-4}}{\downarrow -0.1 \quad 0.000513}$$

million  $9.81 \times 10^7$

$$98100000 \quad 98100000$$

$$5.32 \times 10^{-11}$$

$$0.0000000000532$$

$$0.0000000000532 \times 10^{-10}$$

Sep 3-10:47 AM

# 1.1 Review

Grade: 8th  
Subject: Physical Science  
Date: 8/28

Aug 29-9:08 AM

1 Using your senses to gather information is known as an

\_\_\_\_\_.

observation

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2 A \_\_\_\_\_ is a possible explanation for an observation that can be tested by scientific investigations.

hypothesis

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3 A scientific theory is an explanation of observations that is based on many investigations and/or observations.

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4 A scientific law is a rule of nature.

True

False

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5 The three main branches of science are:

A physical science

B environmental science

C earth science

D consumer science

E life science

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6 \_\_\_\_\_ is a description of how similar or close repeated measurements are to each other.

precision

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7 \_\_\_\_\_ is a description of how close a measurement is to an accepted value.

Accuracy

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8 Scientific notation is a method of writing or displaying very small or very large values in a short form.

True

False

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9 Calculate the percent error if the experimental value of the density of gold is  $18.7 \text{ g/cm}^3$  and the accepted value is  $19.3 \text{ g/cm}^3$ . Answer is a %.

$$\frac{|E.V. - A.V.|}{A.V.} \times 100 = \% \text{ error}$$
$$\frac{|18.7 - 19.3|}{19.3} = \frac{.6}{19.3} = 0.031 \times 100 = 3.1 \%$$

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10 The prefix for 1,000 is ~~Mega~~.

True

False

Kilo

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11 The prefix for 0.01 is Centi-

True

False

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12 The prefix for 10 is Deka-

☒ True

☐ False

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13 The SI unit for electric current is the Ampere (A).

☒ True

☐ False

Sep 4-9:22 AM

- 14 The accepted density for iron is 7.87 g/cm<sup>3</sup>. An experimental measurement give 7.62 g/cm<sup>3</sup>. What is the percent error? Answer is a %.

$$\frac{|7.62 - 7.87|}{7.87} = \frac{0.25}{7.87} \times 100 = 3.18\%$$

Sep 4-9:28 AM

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